WATER RESEARCH

The Journal of the International Association on Water Quality

EXECUTIVE EDITOR

F. G. POHLAND

University of Pittsburgh, U.S.A.

List of Contents, Author Index and Keyword Index for Volume 32, 1998

PERGAMON

WATER RESEARCH

Journal of the International Association on Water Quality

EDITORIAL OFFICE

IAWQ
Duchess House
20 Masons Yard
Duke Street, St James's
London SW1Y 6BU
U.K.

Tel.: (44) 171-839-8390
Fax: (44) 171-839-8299
e-mail:
publications@iawq.org.uk

Executive Director and
Managing Editor
A. MILBURN

Honorary Executive Editor
F. G. POHLAND

Publications Manager
C. D. PURDON

Journals Manager
P. T. NAGLE

Journals Executive
D. TAYLOR

REGIONAL EDITORS

Africa, Western Asia and Southern Asia Region
Professor G. K. Anderson
Department of Civil Engineering
University of Newcastle upon Tyne
Claremont Road
Newcastle upon Tyne NE1 7RU
U.K.
Tel.: (44) 191 222 6406
Fax: (44) 191 222 6669
e-mail: g.k.anderson@ncl.ac.uk

Associate Editor:
T. P. Curtis, University of Newcastle upon Tyne, U.K.

North and Central Africa, Indian Sub-continent and Arab States

Americas Region
Dr F. G. Pohland
Department of Civil Engineering
1140 Benedum Hall
University of Pittsburgh
Pittsburgh, PA 15261
U.S.A.
Tel.: (1) 412 624 1880
Fax: (1) 412 624 0135
e-mail: pohland@engrng.pitt.edu

Associate Editors:
E. R. Hall, University of British Colombia, Canada
R. Vidic, University of Pittsburgh, U.S.A.

North, Central and South America, the Caribbean

British Isles, RSA, Australasia Region
Professor K. J. Ives
IAWQ, Duchess House
20 Masons Yard, Duke Street
St James's, London SW1Y 6BU
U.K.
e-mail: iawq@compuserve.com
Tel.: (44) 171 839 8390
Fax: (44) 171 839 8299

Associate Editor:
D. Dixon, CSIRO—Molecular Science, Australia

U.K., Eire, South Africa, Australia, New Zealand

East Asia and Western Pacific Region
Professor M. Suzuki
Institute of Industrial Science
University of Tokyo
7-22-1 Roppongi, Minato-ku
Tokyo 106
Japan
Tel.: (81) 3 3402 6231 ext. 2412
Fax: (81) 3 3408 0593
e-mail: suzukimo@iis.u-tokyo.ac.jp

Regional editorial board:
K. Fujie, Toyohashi University of Technology, Japan
S. Kyosai, Ministry of Construction, Japan
S.-L. Lo, National Taiwan University, Chinese Taiwan
S. Masunaga, Yokohama National University, Japan
K. Nakamuro, Setsunan University, Japan
M. Okada, Hiroshima University, Japan
A. Sakoda, University of Tokyo, Japan
H.-S. Shin, Korea Advanced Institute for Science and Technology, Korea
M. Wakabayashi, Tokyo Metropolitan Research Institute of Environment, Japan
Q. Yi, Tsinghua University, China

Japan, Korea, China and East Asia

Mediterranean Region
Dr Luc-Andre Leclerc
Chef du Department Gestion des Milieux Aquatiques (Head, Freshwater Systems Management Department) CEMAGREF
Parc de Tourvoie, BP 44
92163 Antony Cedex
France
Tel.: (33) 1 40 96 6103
Fax: (33) 1 40 96 6134
e-mail: luc-andre@cemagref.fr

Associative Editors:
J. Bontoux, University of Montpellier, France
B. Legube, University of Poitiers, France
L. Schwartzbrod, University of Nancy, France

Mediterranean countries and Portugal, and French-language papers

Middle Europe Region
Professor P. Wilderer
Technische Universität München
Am Coulombwall, D-85748 Garching
Germany
Tel.: (49) (0) 89 289 13700
Fax: (49) (0) 89 289 13718
e-mail: 100255.3727@compuserve.com

Associate Editor:
J. Wanner, Prague Institute of Chemical Technology, Czech Republic

German-speaking and Central and Eastern European countries

Northern Europe Region
Please send all papers to the IAWQ Editorial Office in London, address given above

Scandinavia, Benelux, Baltic States, Russia

© 1998 Elsevier Science Ltd. All rights reserved

Annual Institutional Subscription Rates 1999: Europe, The CIS and Japan 6389.00 Dutch Guilders. All other countries U.S.$3243.00. Dutch Guilder prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice. Any enquiry relating to subscriptions should be sent to: **The Americas:** Elsevier Science, Customer Support Department, PO Box 945, New York, NY 10010, U.S.A. [Tel: (+1) 212-633-3730/1-888 4ES-INFO. Fax: (+1) 212-633-3680. E-mail: usinfo-f@elsevier.com]. **Japan:** Elsevier Science Customer Support Department, 9–15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106, Japan [Tel: (+81) 35561-5033. Fax (+81) 35561-5047. E-mail: info@elsevier.co.jp]. **Asia Pacific *(excluding Japan)*:** Elsevier Science (Singapore) Pte Ltd, No. 1 Temasek Avenue, 17-01 Millenia Tower, Singapore 039192 [Tel: (+65) 434-3727. Fax: (+65) 337-2230. E-mail: asiainfo@elsevier.com.sg]. **Rest of the World:** Elsevier Science Customer Service Department, PO Box 211, 1001 AE Amsterdam, The Netherlands [Tel: (+31) 20-485-3757. Fax: (+31) 20-485-3432. E-mail: nlinfo-f@elsevier.nl].

Author Service Department

For queries relating to the general submission of articles (including electronic text and artwork) and the status of accepted manuscripts, please contact the Author Service Department: e-mail: authors@elsevier.co.uk; fax: +44 (0) 1865 843905; tel.: +44 (0) 1865 843900.

Back Issues

Back issues of all previously published volumes are available direct from Elsevier Science Offices (Oxford and New York). Complete volumes and single issues can be purchased for 1993–1997. Earlier issues are available in high quality photo-duplicated copies as complete volumes only.

Application for membership of **International Association on Water Quality** should be made to: Executive Director, *IAWQ*, Duchess House, 20 Masons Yard, Duke Street, St James's, London SWIY 6BU, U.K. (*Tel.*: 0171-839-8390; *Fax*: 0171-839-8299). Registered Charity (England) No. 289269. Individual membership is available from £25 upwards. For details contact *IAWQ*.

CONTENTS OF VOLUME 32

JANUARY

	iii	Notes for Contributors
FREDERICK G. POHLAND	v	Editorial
V. GOMEZ-SERRANO, A. MACIAS-GARCIA, A. ESPINOSA-MANSILLA and C. VALENZUELA-CALAHORRO	1	Adsorption of mercury, cadmium and lead from aqueous solution on heat-treated and sulphurized activated carbon
KAARE HVID HANSEN, IRINI ANGELIDAKI and BRIGITTE KIÆR AHRING Ⓜ	5	Anaerobic digestion of swine manure: inhibition by ammonia
SARA HALLIN and MIKAEL PELL	13	Metabolic properties of denitrifying bacteria adapting to methanol and ethanol in activated sludge
SALVATORE GIAMMANCO, MASSIMO OTTAVIANI, MARIANO VALENZA, ENRICO VESCHETTI, EDOARDO PRINCIPIO, GIUSEPPE GIAMMANCO and SARINA PIGNATO	19	Major and trace elements geochemistry in the ground waters of a volcanic area: Mount Etna (Sicily, Italy)
DAVID R. CONFER and BRUCE E. LOGAN Ⓜ	31	Location of protein and polysaccharide hydrolytic activity in suspended and biofilm wastewater cultures
RUEY-AN DOONG Ⓜ, SHIAN-CHEE WU Ⓜ and TSU-FENG CHEN	39	Modeling transport and fate of chlorinated hydrocarbons governed by biotic transformation in porous media
JEHNG-JUNG KAO Ⓜ, WANG-LONG LIN and CHENG-HSIEH TSAI	47	Dynamic spatial modeling approach for estimation of internal phosphorus load
R. GRACIA, J. L. ARAGÜES and J. L. OVELLEIRO	57	Mn(II)-catalysed ozonation of raw Ebro river water and its ozonation by-products
KERRI L. CAST and JOSEPH R. V. FLORA Ⓜ	63	An evaluation of two cathode materials and the impact of copper on bioelectrochemical denitrification
KRIST GERNAEY Ⓜ, PETER VANROLLEGHEM Ⓜ and WILLY VERSTRAETE Ⓜ	71	On-line estimation of *Nitrosomonas* kinetic parameters in activated sludge samples using titration in-sensor-experiments
ESA S. MELIN, KIMMO T. JÄRVINEN and JAAKKO A. PUHAKKA Ⓜ	81	Effects of temperature on chlorophenol biodegradation kinetics in fluidized-bed reactors with different biomass carriers
B. PETERSEN, H. TEMMINK, M. HENZE Ⓜ and S. ISAACS	91	Phosphate uptake kinetics in relation to PHB under aerobic conditions
MATTHEW J. BEACH Ⓜ and DAVID PASCOE Ⓜ	101	The role of *Hydra vulgaris* (Pallas) in assessing the toxicity of freshwater pollutants
C. COSTA and M. C. MÁRQUEZ	107	Kinetics of the PACT process
MYSORE S. CHANDRAKANTH and GARY L. AMY Ⓜ	115	Effects of NOM source variations and calcium complexation capacity on ozone-induced particle destabilization
JETTE B. CHRISTENSEN, DORTHE L. JENSEN, CHRISTIAN GRØN, ZDENEK FILIP and THOMAS H. CHRISTENSEN	125	Characterization of the dissolved organic carbon in landfill leachate polluted groundwater
ANNE BELINDA THOMSEN	136	Degradation of quinoline by wet oxidation—kinetic aspects and reaction mechanisms
R. RONDAY, G. H. AALDERINK and S. J. H. CRUM	147	Application methods of pesticides to an aquatic mesocosm in order to simulate effects of spray drift

TANJU KARANFIL, JAMES E. KILDUFF, MARK A. SCHLAUTMAN and WALTER J. WEBER JR — 154 The oxygen sensitivity of organic macromolecule sorption by activated carbon: effects of solution chemistry

CHIE-CHIEN TSENG, THOMAS G. POTTER and BEN KOOPMAN — 165 Effect of influent chemical oxygen demand to nitrogen ratio on a partial nitrification/complete denitrification process

S. L. LO and S. F. SHIUE — 174 Recovery of Cr(VI) by quaternary ammonium compounds

CHONGRAK POLPRASERT and NAWA RAJ KHATIWADA — 179 An integrated kinetic model for water hyacinth ponds used for wastewater treatment

ANDERS DÜCKER and ANNA LEDIN — 186 Properties of the particulate phase in deep saline groundwater in Laxemar, Sweden

PAULO SÉRGIO MARTINS DE CARVALHO, ELIETE ZANARDI, SANDRA VALÉRIA BURATINI, MARTA CONDÉ LAMPARELLI and MAGALI COIMBRA MARTINS — 193 Oxidizing effect on metal remobilization and *Daphnia similis* toxicity from a Brazilian reservoir sediment suspension

D. BRDJANOVIC, A. SLAMET, M. C. M. VAN LOOSDRECHT, C. M. HOOIJMANS, G. J. ALAERTS and J. J. HEIJNEN — 200 Impact of excessive aeration on biological phosphorus removal from wastewater

ZIJIN LU and W. HEGEMANN — 209 Anaerobic toxicity and biodegradation of formaldehyde in batch cultures

C. J. WILLIAMS, D. ADERHOLD and R. G. J. EDYVEAN — 216 Comparison between biosorbents for the removal of metal ions from aqueous solutions

KIT-HUNG CHAN, MICHAEL H. W. LAM, KA-FAI POON, HUNG-YUI YEUNG and TONY K. T. CHIU — 225 Application of sedimentary fecal stanols and sterols in tracing sewage pollution in coastal waters

M. G. KELLY — 236 Use of the trophic diatom index to monitor eutrophication in rivers

S. L. PERCIVAL, J. S. KNAPP, R. EDYVEAN and D. S. WALES — 243 Biofilm development on stainless steel in mains water

Research Notes

DANIEL M. WHITE and WILLIAM SCHNABEL — 254 Treatment of cyanide waste in a sequencing batch biofilm reactor

SUJIT BANERJEE, TALAT MAHMOOD, PAUL M. PHELAN and RUSSELL W. FOULKE — 258 Impulse drying sludge

Comments

SALIM DJENIDI — 261 Comment on "Stratification dynamics in wastewater stabilization ponds" by R. Gu and H. G. Stefan, *Wat. Res.* **29,** 1909–1923 (1995) and Reply by Ruochuan Gu

A. KAPOOR and T. VIRARAGHAVAN — 263 Comment on "Application of *Aspergillus oryzae* and *Rhizopus oryzae* for Cu(II) removal" by C. Huang and C. P. Huang, *Wat. Res.* **30,** 1985–1990 (1996) and Reply by Chihpin Huang and C. P. Huang

FEBRUARY

iii Notes for Contributors

M. KÜHN, C. NIEWÖHNER, M. ISENBECK-SCHRÖTER and H. D. SCHULZ — 265 Determination of major and minor constituents in anoxic thermal brines of deep sandstone aquifers in Northern Germany

J. M. DORIOZ, J. P. PELLETIER and P. BENOIT — 275 Proprietés physico-chimiques et biodisponibilité potentielle du phosphore particulaire selon l'origine des sédiments dans un bassin versant du Lac Léman (France)

J-P. F. P. PALMENTIER, VINCE Y. TAGUCHI, STEVE W. D. JENKINS, DAVID T. WANG, KIM-PHUONG NGO and DON ROBINSON — 287 The determination of geosmin and 2-methylisoborneol in water using isotope dilution high resolution mass spectrometry

Theopharis G. Danis, Triantafyllos A. Albanis, Dimitrios E. Petrakis and Philip J. Pomonis	295	Removal of chlorinated phenols from aqueous solutions by adsorption on alumina pillared clays and mesoporous alumina aluminum phosphates
Filiz B. Dilek, Celal F. Gokcay and Ulku Yetis	303	Combined effects of Ni(II) and Cr(VI) on activated sludge
Per Halkjær Nielsen and Kristian Keiding	313	Disintegration of activated sludge flocs in presence of sulfide
Robert P. Mason and Kristin A. Sullivan	321	Mercury and methylmercury transport through an urban watershed
Stefan Diehl and Ulf Jeppsson	331	A model of the settler coupled to the biological reactor
P. Ekholm and K. Krogerus	343	Bioavailability of phosphorus in purified municipal wastewaters
Alexander P. Bianchi and Mark S. Varney	352	Volatile organic compounds in the surface waters of a British estuary. Part 1. Occurrence, distribution and variation
Alexander P. Bianchi and Mark S. Varney	371	Volatile organic compounds in the surface waters of a British estuary. Part 2. Fate processes
M. A. S. Graça and C. N. Coimbra	380	The elaboration of indices to assess biological water quality. A case study
K. Sakadevan and H. J. Bavor	393	Phosphate adsorption characteristics of soils, slags and zeolite to be used as substrates in constructed wetland systems
T. J. Butter, L. M. Evison, I. C. Hancock, F. S. Holland, K. A. Matis, A. Philipson, A. I. Sheikh and A. I. Zouboulis	400	The removal and recovery of cadmium from dilute aqueous solutions by biosorption and electrolysis at laboratory scale
Francien van Luijn, Paul C. M. Boers and Lambertus Lijklema	407	Anoxic N_2 fluxes from freshwater sediments in the absence of oxidized nitrogen compounds
R. L. Droste	410	Endogenous decay and bioenergetics theory for aerobic wastewater treatment
Olivier Errécalde, Martin Seidl and Peter G. C. Campbell	419	Influence of a low molecular weight metabolite (citrate) on the toxicity of cadmium and zinc to the unicellular green alga *Selenastrum capricornutum*: an exception to the free-ion model
Reşaţ Apak, Esma Tütem, Mehmet Hügül and Jülide Hizal	430	Heavy metal cation retention by unconventional sorbents (red muds and fly ashes)
Joaquim C. G. Esteves da Silva, Adélio A. S. C. Machado and Mónica A. B. A. Silva	441	Acid–base properties of fulvic acids extracted from an untreated sewage sludge and from composted sludge
T. Grischek, K. M. Hiscock, T. Metschies, P. F. Dennis and W. Nestler	450	Factors affecting denitrification during infiltration of river water into a sand and gravel aquifer in Saxony, Germany
E. Ubay Çokgör, S. Sözen, D. Orhon and M. Henze	461	Respirometric analysis of activated sludge behaviour—I. Assessment of the readily biodegradable substrate
S. Sözen, E. Ubay Çokgör, D. Orhon and M. Henze	476	Respirometric analysis of activated sludge behaviour—II. Heterotrophic growth under aerobic and anoxic conditions
Te-Fu L. Ho and James R. Bolton	489	Toxicity changes during the UV treatment of pentachlorophenol in dilute aqueous solution
S. H. Gharaibeh, Wa'il Y. Abu-El-Sha'r and M. M. Al-Kofahi	498	Removal of selected heavy metals from aqueous solutions using processed solid residue of olive mill products
Francesc Ventura, M^ Rosa Boleda, Roger Lloret and Jordi Martin-Alonso	503	Strategies for the identification of compounds causing odours in water: a study of creosote spills
Mengchang He, Zijian Wang and Hongxiao Tang	510	The chemical, toxicological and ecological studies in assessing the heavy metal pollution in Le An River, China

MIN ZHANG, JOO HWA TAY, YI QIAN and XIA SHENG GU — 519 Coke plant wastewater treatment by fixed biofilm system for COD and NH_3-N removal

SHAHNAZ ISLAM and MAKRAM T. SUIDAN — 528 Electrolytic denitrification: long term performance and effect of current intensity

MARCH

iii Notes for Contributors

RIITTA H. KETTUNEN Ⓜ and JUKKA A. RINTALA Ⓜ — 537 Performance of an on-site UASB reactor treating leachate at low temperature

R.-C. BRUNET and K. BRIAN ASTIN — 547 Variation in phosphorus flux during a hydrological season: the River Adour

M. PÉREZ, L. I. ROMERO and D. SALES — 559 Comparative performance of high rate anaerobic thermophilic technologies treating industrial wastewater

CORNELIA C. FALK, PANAGIOTIS KARANIS Ⓜ, DIRK SCHOENEN and HANS MARTIN SEITZ — 565 Bench scale experiments for the evaluation of a membrane filtration method for the recovery efficiency of *Giardia* and *Cryptosporidium* from water

A. J. LAWRENCE Ⓜ and C. POULTER — 569 Development of a sub-lethal pollution bioassay using the estuarine amphipod *Gammarus duebeni*

SIBEL ZOR, BIRGÜL YAZICI, MEHMET ERBİL and HASAN GALİP — 579 The electrochemical degradation of linearalkylbenzenesulfonate (LAS) on platinum electrode

PETER C. POLLARD Ⓜ, MARC A. STEFFENS Ⓜ, CATHERINE A. BIGGS Ⓜ and PAUL A. LANT Ⓜ — 587 Bacterial growth dynamics in activated sludge batch assays

EDUARDA B. H. SANTOS and ARMANDO C. DUARTE — 597 The influence of pulp and paper mill effluents on the composition of the humic fraction of aquatic organic matter

REBECCA A. BARRETT Ⓜ and SIMON A. PARSONS — 609 The influence of magnetic fields on calcium carbonate precipitation

W. J. WALLEY Ⓜ and V. N. FONTAMA — 613 Neural network predictors of average score per taxon and number of families at unpolluted river sites in Great Britain

S. J. STANGROOM, C. L. MACLEOD and J. N. LESTER — 623 Photosensitized transformation of the herbicide 4-chloro-2-methylphenoxy acetic acid (MCPA) in water

LINDA A. LAWTON, BENJAMIN J. P. A. CORNISH Ⓜ and ANDREW W. R. MACDONALD — 633 Removal of cyanobacterial toxins (microcystins) and cyanobacterial cells from drinking water using domestic water filters

SRIDHAR SUSARLA, YOSHITAKA YONEZAWA Ⓜ and SHIGEKI MASUNAGA Ⓜ — 639 Reductive transformations of halogenated aromatics in anaerobic estuarine sediment: kinetics, products and pathways

S. D. LENNOX, R. H. FOY, R. V. SMITH, E. F. UNSWORTH and D. R. SMYTH — 649 A comparison of agricultural water pollution incidents in Northern Ireland with those in England and Wales

PIERRE BUFFIÈRE, J. P. STEYER Ⓜ, C. FONADE and R. MOLETTA Ⓜ — 657 Modeling and experiments on the influence of biofilm size and mass transfer in a fluidized bed reactor for anaerobic digestion

TODD L. INGERSOLL and LAWRENCE A. BAKER — 677 Nitrate removal in wetland microcosms

SUSANNE BARTH — 685 Application of boron isotopes for tracing sources of anthropogenic contamination in groundwater

G. VAN DONGEN and L. GEUENS — 691 Multivariate time series analysis for design and operation of a biological wastewater treatment plant

R. TICHÝ, A. JANSSEN, J. T. C. GROTENHUIS, R. VAN ABSWOUDE and G. LETTINGA Ⓜ — 701 Oxidation of biologically-produced sulphur in a continuous mixed-suspension reactor

D. Jolley, W. Maher and P. Cullen Ⓜ	711	Rapid method for separating and quantifying orthophosphate and polyphosphates: application to sewage samples
G. Akay, B. Keskinler, A. Çakici and U. Danis	717	Phosphate removal from water by red mud using crossflow microfiltration
W. C. Chang Ⓜ, C. F. Ouyang Ⓜ, W. L. Chiang and C. W. Hou Ⓜ	727	Sludge pre-recycle control of dynamic enhanced biological phosphorus removal system: an application of on-line fuzzy controller
K. P. Rawat, A. Sharma and S. M. Rao	737	Microbiological and physicochemical analysis of radiation disinfected municipal sewage
C. S. P. Ojha and Rajnish Shrivastava	741	A rational approach for the design of in-series biofilm reactors
G. N. Demirer and R. E. Speece Ⓜ	747	Anaerobic biotransformation of four 3-carbon compounds (acrolein, acrylic acid, allyl alcohol and *n*-propanol) in UASB reactors
R. M. Wu and D. J. Lee Ⓜ	760	Hydrodynamic drag force exerted on a moving floc and its implication to free-settling tests
Kazuhiko Noto, Takako Ogasawara, Yuichi Suwa and Tatsuo Sumino	769	Complete oxidation of high concentration of ammonia by retaining incompatible nitrification activities in three-vessel system
Matthias Wiemann, Harm Schenk and Werner Hegemann Ⓜ	774	Anaerobic treatment of tannery wastewater with simultaneous sulphide elimination
Anselme Ndabigengesere and K. Subba Narasiah	781	Quality of water treated by coagulation using *Moringa oleifera* seeds
A. G. James, I. A. Watson-Craik Ⓜ and E. Senior	792	The effects of organic acids on the methanogenic degradation of the landfill leachate molecules butyrate and valerate
Zhenrong Qian and T. C. Tan	801	Response characteristics of a dead-cell BOD sensor
C. W. K. Chow, J. House, R. M. A. Velzeboer, M. Drikas Ⓜ, M. D. Burch and D. A. Steffensen	808	The effect of ferric chloride flocculation on cyanobacterial cells
V. O'Flaherty, P. Lens, B. Leahy and E. Colleran Ⓜ	815	Long-term competition between sulphate-reducing and methane-producing bacteria during full-scale anaerobic treatment of citric acid production wastewater
D. S. Baldwin Ⓜ, P. Ford and D. L. Nielsen	826	Resolution of the spatial variability in sediment composition within and between water-storage reservoirs using non-parametric statistical techniques
Charles Glass and JoAnn Silverstein	831	Denitrification kinetics of high nitrate concentration water: pH effect on inhibition and nitrite accumulation
Donald Dean Adrian and Thomas G. Sanders	840	Oxygen sag equation for second-order BOD decay
Benjamin S. Magbanua Jr, Yunn-Tzer Lu Ⓜ and C. P. Leslie Grady Jr Ⓜ	849	A technique for obtaining representative biokinetic parameter values from replicate sets of parameter estimates
J. Z. Yang and K. C. Lin	856	Parameter determination for the intermittently aerated completely mixed (IACM) process
Jesús Ibarluzea, Belen Moreno, Carmen Zigorraga, Teresa Castilla, Maria Martinez and Javier Santamaria	865	Determinants of the microbiological water quality of indoor swimming-pools in relation to disinfection
Irina V. Perminova, Fritz H. Frimmel Ⓜ, Dimitrii V. Kovalevskii, Gedrun Abbt-braun, Alexey V. Kudryavtsev and Sebastian Hesse	872	Development of a predictive model for calculation of molecular weight of humic substances
Mauro Majone Ⓜ, Marco Petrangeli Papini and Enrico Rolle Ⓜ	882	Influence of metal speciation in landfill leachates on kaolinite sorption

HORNG-GUANG LEU, CHIN-DEE LEE, C. F. OUYANG and HUA-TAN TSENG — 891 Effects of organic matter on the conversion rates of nitrogenous compounds in a channel reactor under various flow conditions

CHIH CHAO WU, CHIHPIN HUANG and D. J. LEE — 900 Bound water content and water binding strength on sludge flocs

I. L. CHANG and D. J. LEE — 905 Ternary expression stage in biological sludge dewatering

WEN-HUI KUAN, SHANG-LIEN LO, MING K. WANG and CHENG-FANG LIN — 915 Removal of Se(IV) and Se(VI) from water by aluminum-oxide-coated sand

Research Notes

E. SCHERER and R. E. MCNICOL — 924 Preference-avoidance responses of lake whitefish (*Coregonus clupeaformis*) to competing gradients of light and copper, lead, and zinc

J-Q. JIANG and N. J. D. GRAHAM — 930 Observations of the comparative hydrolysis/precipitation behaviour of polyferric sulphate and ferric sulphate

XIAODI HAO and JOSE MARTINEZ — 936 Removing nitrate and ammonium from drainage water by simulation of natural biological processes

ALY M. A. ABD-ALLAH and TAREK SRORR — 944 Biodegradation of anionic surfactants in the presence of organic contaminants

DANIELA BAGANZ, GEORG STAAKS and CHRISTIAN STEINBERG — 948 Impact of the cyanobacteria toxin, microcystin-LR on behaviour of zebrafish, *Danio rerio*

MACHIKO NISHINO, MANABU FUKUI and TAKUO NAKAJIMA — 953 Dense mats of *Thioploca*, gliding filamentous sulfur-oxidizing bacteria in Lake Biwa, central Japan

Technical Notes

M. G. WOOD, T. HOWES, J. KELLER and M. R. JOHNS — 958 Two dimensional computational fluid dynamic models for waste stabilisation ponds

H. A. HAWKES — 964 Origin and development of the Biological Monitoring Working Party score system

C. NAMASIVAYAM and K. RANGANATHAN — 969 Effect of organic ligands on the removal of Pb(II), Ni(II) and Cd(II) by waste Fe(III)/Cr(III) hydroxide

973 Forthcoming Conferences

APRIL

PEIKANG JIN, SANJOY K. BHATTACHARYA, CLIFFORD J. WILLIAMS and HAIHNOG ZHANG — 977 Effects of sulfide addition on copper inhibition in methanogenic systems

A. LÓPEZ-DELGADO, C. PÉREZ and F. A. LÓPEZ — 989 Sorption of heavy metals on blast furnace sludge

PURNENDU BOSE, WILLIAM H. GLAZE and D. SCOTT MADDOX — 997 Degradation of RDX by various advanced oxidation processes: I. Reaction rates

PURNENDU BOSE, WILLIAM H. GLAZE and D. SCOTT MADDOX — 1005 Degradation of RDX by various advanced oxidation processes: II. Organic by-products

JIANPING LIN and BRUCE A. W. COLLER — 1019 Measurement of dissolved aluminium in waters: use of the tangential flow filtration technology

MARC BAILLIEUL and PAUL SCHEUNDERS — 1027 On-line determination of the velocity of simultaneously moving organisms by image analysis for the detection of sublethal toxicity

DAMIR BRDJANOVIC, SUSANNE LOGEMANN, MARK C. M. VAN LOOSDRECHT, CHRISTINE M. HOOIJMANS, GUY J. ALAERTS and JOSEPH J. HEIJNEN — 1035 Influence of temperature on biological phosphorus removal: process and molecular ecological studies

B.-E. BOUMANSOUR and J.-L. VASEL — 1049 A new tracer gas method to measure oxygen transfer and enhancement factor on RBC

Sheng H. Lin, Ching T. Shyu and Mei C. Sun	1059	Saline wastewater treatment by electrochemical method
Helena Guasch, Joan Armengol, Eugènia Martí and Sergi Sabater	1067	Diurnal variation in dissolved oxygen and carbon dioxide in two low-order streams
O. Fiehn, G. Wegener, J. Jochimsen and M. Jekel	1075	Analysis of the ozonation of 2-mercaptobenzothiazole in water and tannery wastewater using sum parameters, liquid- and gas chromatography and capillary electrophoresis
Ivana Ivancev-Tumbas, Bozo Dalmacija, Zagorka Tamas and Elvira Karlovic	1085	Reuse of biologically regenerated activated carbon for phenol removal
Marko Zlokarnik	1095	Separation of activated sludge from purified waste water by Induced Air Flotation (IAF)
Ping-Chin Hsiau and Shang-Lien Lo	1103	Fractionation and leachability of Cu in lime-treated sewage sludge
M. L. Zhou, G. Martin, S. Taha and F. Sant'anna	1109	Comparaison de modeles et modelisation d'isotherme en phase liquide d'adsorption sur charbon actif
S. Roger, M. Montrejaud-Vignoles, M. C. Andral, L. Herremans and J. P. Fortune	1119	Mineral, physical and chemical analysis of the solid matter carried by motorway runoff water
Lluís Camarero and Jordi Catalan	1126	A simple model of regional acidification for high mountain lakes: application to the Pyrenean lakes (North-East Spain)
Alex Chuks Chindah	1137	The effect of industrial activities on the periphyton community at the upper reaches of New Calabar river, Niger delta, Nigeria
Paul Pavelic, Santo R. Ragusa, Robert L. Flower, Stephanie M. Rinck-Pfeiffer and Peter J. Dillon	1144	Diffusion chamber method for *in situ* measurement of pathogen inactivation in groundwater
S. Cornu, J. P. Ambrosi, Y. Lucas and T. Desjardins	1151	Origin and behaviour of dissolved chlorine and sodium in Brazilian rainforest
N. Clarkson, J. W. Leftley, D. T. Meldrum and J. W. Watson	1162	An assessment of the cage-culture turbidostat as an alternative algal bioassay
A. A. M. Daifullah and B. S. Girgis	1169	Removal of some substituted phenols by activated carbon obtained from agricultural waste
P. N. L. Lens, M. C. Van den Bosch, L. W. Hulshoff Pol and G. Lettinga	1178	Effect of staging on volatile fatty acid degradation in a sulfidogenic granular sludge reactor
E. Reisenhofer, G. Adami and P. Barbieri	1193	Using chemical and physical parameters to define the quality of karstic freshwaters (Timavo River, North-eastern Italy): a chemometric approach
M. Chevreuil, M. Blanchard, M. J. Teil and A. Chesterikoff	1204	Polychlorobiphenyl behaviour in the water/sediment system of the Seine river, France
Christine Maurines-Carboneill, Jean-Jacques Pernelle, Loïc Morin, Gérard Sachon and Gérard Leblon	1213	Relevance of the INT test response as an indicator of ETS activity in monitoring heterotrophic aerobic bacterial populations in activated sludges
F. Quignon, F. Thomas, C. Gantzer, A. Huyard and L. Schwartzbrod	1222	Virus adsorption in a complex system: an experimentally designed study
V. Jee, D. M. Beckles, C. H. Ward and J. B. Hughes	1231	Aerobic slurry reactor treatment of phenanthrene contaminated sediment
H. Brouwer, A. Klapwijk and K. J. Keesman	1240	Identification of activated sludge and wastewater characteristics using respirometric batch-experiments
E. P. A. van Langerak, G. Gonzalez-Gil, A. van Aelst, J. B. van Lier, H. V. M. Hamelers and G. Lettinga	1255	Effects of high calcium concentrations on the development of methanogenic sludge in upflow anaerobic sludge bed (UASB) reactors

V. LINEK, J. SINKULE and V. JANDA — 1264 — Design of packed aeration towers to strip volatile organic contaminants from water

BERND NOWACK — 1271 — The behavior of phosphonates in wastewater treatment plants of Switzerland

I. R. LANTZKE, A. D. HERITAGE, G. PISTILLO and D. S. MITCHELL[M] — 1280 — Phosphorus removal rates in bucket size planted wetlands with a vertical hydraulic flow

NAZIR SALHANI and ANTOINETTE UELKER-DEFFUR — 1287 — Improved quantification of aggregated bacteria by combined enzymatic and mechanical treatment of flocs and biofilm from a rotating drum bioreactor

JOHN B. COPP[M] and PETER L. DOLD — 1296 — Confirming the nitrate-to-oxygen conversion factor for denitrification

ELISA P. GONÇALVES and RUI A. R. BOAVENTURA[M] — 1305 — Uptake and release kinetics of copper by the aquatic moss *Fontinalis antipyretica*

E. LÓPEZ, B. SOTO, M. ARIAS, A. NÚÑEZ[M], D. RUBINOS and M. T. BARRAL — 1314 — Adsorbent properties of red mud and its use for wastewater treatment

Comment

BEATA GORCZYCA — 1323 — Comment on "Settling velocity of an aluminium-kaolinite floc", by Yasuhisa Adachi and Yoshikazu Tanaka, *Wat. Res.* **31**, 449–454 (1997)

Author's Reply

YASUHISA ADACHI — 1324

Research Notes

KENNEDY F. ROCHE[M] — 1325 — Growth potential of *Daphnia magna* Straus in the water of dairy waste stabilization ponds

C. GANTZER, A. MAUL, Y. LEVI[M] and L. SCHWARTZBROD[M] — 1329 — Fate of the genome and infectious units of coxsackie B3 virus in phosphate buffered saline

E. MIHALYFALVY, H. T. JOHNSTON, M. K. GARRETT, H. J. FALLOWFIELD and N. J. CROMAR — 1334 — Improved mixing of high rate algal ponds

Technical Note

JUAN C. CODINA, M. ASCENSIÓN MUÑOZ, FRANCISCO M. CAZORLA, ALEJANDRO PÉREZ-GARCÍA, MIGUEL A. MORIÑGO and ANTONIO DE VICENTE — 1338 — The inhibition of methanogenic activity from anaerobic domestic sludges as a simple toxicity bioassay

Erratum — 1343

MAY

TOM P. CURTIS — v — Editorial; False dichotomies

ELIZABETH C. BUTLER and KIM F. HAYES — 1345 — Micellar solubilization of nonaqueous phase liquid contaminants by nonionic surfactant mixtures: effects of sorption, partitioning and mixing

ALBERTO CABRERO, SARA FERNANDEZ, FERNANDO MIRADA and JULIAN GARCIA — 1355 — Effects of copper and zinc on the activated sludge bacteria growth kinetics

DONALD C. SCHREIBER and SPYROS G. PAVLOSTATHIS[M] — 1363 — Biological oxidation of thiosulfate in mixed heterotrophic/autotrophic cultures

UPAL GHOSH, A. SCOTT WEBER[M], JAMES N. JENSEN and JOHN R. SMITH — 1373 — Dissolved PCB congener distribution in generator column solutions

TURGUT T. ONAY and FREDERICK G. POHLAND — 1383 — *In situ* nitrogen management in controlled bioreactor landfills

Michèle Prévost[M], Annie Rompré, Josée Coallier, Pierre Servais[M], Patrick Laurent, Bernard Clément and Pierre Lafrance[M]	1393	Suspended bacterial biomass and activity in full-scale drinking water distribution systems: impact of water treatment
J. M. Tobin and J. C. Roux	1407	Mucor biosorbent for chromium removal from tanning effluent
Steven W. Till, Simon J. Judd and Bob McLoughlin	1417	Reduction of faecal coliform bacteria in sewage effluents using a microporous polymeric membrane
Michael J. Broughton, Jürgen H. Thiele, Edward J. Birch and Alberto Cohen[M]	1423	Anaerobic batch digestion of sheep tallow
R. M. Dils and A. L. Heathwaite	1429	Development of an iron oxide-impregnated paper strip technique for the determination of bioavailable phosphorus in runoff
Li Zhang, Li Zhao, Yaoting Yu and Changzhi Chen	1437	Removal of lead from aqueous solution by non-living *Rhizopus nigricans*
Wei-Min Wu[M], Jeffery Nye, Mahendra K. Jain[M] and Robert F. Hickey	1445	Anaerobic dechlorination of trichloroethylene (TCE) to ethylene using complex organic materials
Walter K. Dodds, John R. Jones and Eugene B. Welch	1455	Suggested classification of stream trophic state: distributions of temperate stream types by chlorophyll, total nitrogen, and phosphorus
Anette Æsøy, Hallvard Ødegaard[M], Kristin Bach, Roger Pujol[M] and Michel Hamon	1463	Denitrification in a packed bed biofilm reactor (BIOFOR)—Experiments with different carbon sources
Zhu Kun[M], Chen Hui, Li Guanghe and Liu Zhaochang	1471	*In situ* remediation of petroleum compounds in groundwater aquifer with chlorine dioxide
Thomas F. Hess, Thomas A. Lewis, Ronald L. Crawford, Sudhakar Katamneni, John H. Wells and Richard J. Watts	1481	Combined photocatalytic and fungal treatment for the destruction of 2,4,6-trinitrotoluene (TNT)
R. Andreozzi[M], V. Caprio, A. Insola, R. Marotta and V. Tufano	1492	The ozonation of pyruvic acid in aqueous solutions catalyzed by suspended and dissolved manganese
Reshmi V. Sharma, Rick T. Edwards and Ronald Beckett	1497	Analysis of bacteria in aquatic environments using sedimentation field-flow fractionation: (I) biomass determination
Reshmi V. Sharma, Rick T. Edwards and Ronald Beckett	1508	Analysis of bacteria in aquatic environments using sedimentation field-flow fractionation: (II) physical characterization of cells
A. Pianetti, W. Baffone, F. Bruscolini, E. Barbieri, M. R. Biffi, L. Salvaggio and A. Albano	1515	Presence of several pathogenic bacteria in the Metauro and Foglia Rivers (Pesaro-Urbino, Italy)
Karen L. Simpson and Keith P. Hayes	1522	Drinking water disinfection by-products: an Australian perspective
Hong Wang and Roger A. Falconer[M]	1529	Simulating disinfection processes in chlorine contact tanks using various turbulence models and high-order accurate difference schemes
Joon H. Min and Janet G. Hering	1544	Arsenate sorption by Fe(III)-doped alginate gels
Nazim Cicek, Hans Winnen, Makram T. Suidan[M], Brian E. Wrenn, Vincent Urbain[M] and Jacques Manem	1553	Effectiveness of the membrane bioreactor in the biodegradation of high molecular weight compounds
U. Welander[M], T. Henrysson and T. Welander[M]	1564	Biological nitrogen removal from municipal landfill leachate in a pilot scale suspended carrier biofilm process
Ching-Shyung Hwu[M], Szu-Kung Tseng[M], Chung-Yu Yuan, Zoltán Kulik and Gatze Lettinga[M]	1571	Biosorption of long-chain fatty acids in UASB treatment process
Gary Carlson and JoAnn Silverstein[M]	1580	Effect of molecular size and charge on biofilm sorption of organic matter

GEORGE A. SORIAL[M], FRANCIS L. SMITH, MAKRAM T. SUIDAN[M], AMIT PANDIT, PRATIM BISWAS and RICHARD C. BRENNER — 1593 — Evaluation of trickle-bed air biofilter performance for styrene removal

N. MAMERI, A. R. YEDDOU, H. LOUNICI, D. BELHOCINE, H. GRIB and B. BARIOU — 1604 — Defluoridation of septentrional Sahara water of north Africa by electrocoagulation process using bipolar aluminium electrodes

DONGYE ZHAO and ARUP K. SENGUPTA[M] — 1613 — Ultimate removal of phosphate from wastewater using a new class of polymeric ion exchangers

O. MIZUNO[M], Y. Y. LI[M] and T. NOIKE[M] — 1626 — The behavior of sulfate-reducing bacteria in acidogenic phase of anaerobic digestion

YAN HUA LIU — 1635 — Relation between sludge carbohydrate content and biological phosphate removal

M. ROY and D. COUILLARD — 1642 — Metal leaching following sludge application to a deciduous forest soil

MELANIE VON DER WIESCHE and ASTRID WETZEL — 1653 — Temporal and spatial dynamics of nitrite accumulation in the River Lahn

J. P. GAO, J. MAGUHN, P. SPITZAUER and A. KETTRUP — 1662 — Sorption of pesticides in the sediment of the Teufelsweiher pond (Southern Germany). I: Equilibrium assessments, effect of organic carbon content and pH

GEORGE IZAGUIRRE[M] and WILLIAM D. TAYLOR — 1673 — A *Pseudanabaena* species from Castaic Lake, California, that produces 2-methylisoborneol

YONGWOO HWANG and TOSHIHIRO TANAKA[M] — 1678 — Control of *Microthrix parvicella* foaming in activated sludge

P. WESTERHOFF[M], R. SONG, G. AMY[M] and R. MINEAR[M] — 1687 — Numerical kinetic models for bromide oxidation to bromine and bromate

Research Notes

A. KLAPWIJK[M], H. BROUWER, E. VROLIJK and K. KUJAWA — 1700 — Control of intermittently aerated nitrogen removal plants by detection endpoints of nitrification and denitrification using respirometry only

A. BEHECHTI, K.-W. SCHRAMM, A. ATTAR, J. NIEDERFELLNER and A. KETTRUP — 1704 — Acute aquatic toxicities of four musk xylene derivatives on *Daphnia magna*

GERMÁN BUITRÓN[M] and MATILDE GALVÁN[M] — 1708 — Effect of compression–decompression on helminth eggs present in sludge of a settling tank

MATTHEW TATARKO and JOHN A. BUMPUS — 1713 — Biodegradation of Congo Red by *Phanerochaete chrysosporium*

Technical Notes

BLAINE F. SEVERIN and PETER F. ROESSLER — 1718 — Resolving UV photometer outputs with modeled intensity profiles

J. J. C. DAWSON and M. F. BILLETT — 1725 — The separation of suspended particulate material into organic, mineral and organo-mineral fractions

1732 — Erratum

JUNE

KEN IVES — v — Editorial: Poetry of pollution

LICIA GUZZELLA and SILVIO SORA — 1733 — Mutagenic activity of lake water samples used as drinking water resources in Northern Italy

CHARLES J. ZOUNGRANA, RAYMOND DESJARDINS and MICHÈLE PRÉVOST[M] — 1743 — Influence de la reminéralisation sur l'évolution de la biodégradabilité de la matière organique naturelle au cours de l'ozonation

MARIJANA ERK[M], LJERKA MUSANI and BISERKA RASPOR — 1753 — The interactions of ^{54}Mn with humic acids in freshwater systems

GORDAN GRGURIC and CHRISTOPHER J. COSTON	1759	Modeling of nitrate and bromate in a seawater aquarium
PAUL F. HENSHAW, J. K. BEWTRA Ⓜ and N. BISWAS Ⓜ	1769	Hydrogen sulphide conversion to elemental sulphur in a suspended-growth continuous stirred tank reactor using *Chlorobium limicola*
URI ZOLLER Ⓜ, LIOR C. GOLDENBERG and ABRAHAM J. MELLOUL	1779	The "short-cut" enhanced contamination of the Gaza Strip coastal aquifer
B. GINZBURG, I. CHALIFA, T. ZOHARI, O. HADAS, I. DOR and O. LEV Ⓜ	1789	Identification of oligosulfide odorous compounds and their source in the Lake of Galilee
L. JORDAN-MEILLE, J.-M. DORIOZ Ⓜ and N. MATHIEU	1801	Approche expérimentale par crue artificielle de la participation du réseau hydrographique à l'exploration de phosphore par un petit bassin versant rural
SPYROS K. GOLFINOPOULOS, MARIA N. KOSTOPOULOU and THEMISTOKLES D. LEKKAS	1811	Volatile Halogenated Organics in the water supply system in Athens, Greece
WILLIAM A. HOUSE Ⓜ and FRANK H. DENISON	1819	Phosphorus dynamics in a lowland river
ANDREA K. BORSODI, ISTVÁN FARKAS and PÉTER KURDI	1831	Numerical analysis of planktonic and reed biofilm bacterial communities of Lake Fertö (Neusiedlersee, Hungary/Austria)
LOIS J. URANOWSKI, CHARLES H. TESSMER and RADISAV D. VIDIC Ⓜ	1841	The effect of surface metal oxides on activated carbon adsorption of phenolics
R. BUCKLEY, E. CLOUGH, W. WARNKEN and C. WILD	1852	Coliform bacteria in streambed sediments in a subtropical rainforest conservation reserve
KAI BESTER, HEINRICH HÜHNERFUSS, WILFRIED LANGE, GERHARD G. RIMKUS and NORBERT THEOBALD	1857	Results of non target screening of lipophilic organic pollutants in the German Bight II: polycyclic musk fragrances
Y. LIANG, R. Y. H. CHEUNG Ⓜ, S. EVERITT and M. H. WONG Ⓜ	1864	Reclamation of wastewater for polyculture of freshwater fish: wastewater treatment in ponds
MOHAMED A. EL-DIB and HODA F. ABOU-WALY	1881	Biodegradation of some triazines and phenylureas in surface waters
WILLIAM J. MITSCH Ⓜ and KAREN M. WISE	1888	Water quality, fate of metals, and predictive model validation of a constructed wetland treating acid mine drainage
R. A. BRENNAN, N. NIRMALAKHANDAN and R. E. SPEECE Ⓜ	1901	Comparison of predictive methods for Henrys Law Coefficients of organic chemicals
M. KORNAROS Ⓜ and G. LYBERATOS Ⓜ	1912	Kinetic modelling of *Pseudomonas denitrificans* growth and denitrification under aerobic, anoxic and transient operating conditions
YAEL LAOR, WALTER J. FARMER, Y. AOCHI and PETER F. STROM Ⓜ	1923	Phenanthrene binding and sorption to dissolved and to mineral-associated humic acid
N. SAUTHIER, A. GRASMICK Ⓜ and J. P. BLANCHETON Ⓜ	1932	Biological denitrification applied to a marine closed aquaculture system
THOMAS POIGER, JENNIFER A. FIELD, THOMAS M. FIELD, HANSRUEDI SIEGRIST Ⓜ and WALTER GIGER	1939	Behavior of fluorescent whitening agents during sewage treatment
HEEKYUNG PARK and T. JOE JOHNSON	1948	Hydrodynamic modeling in solving combined sewer problems: a case study
YOUNG KU Ⓜ, JAY-LIN CHANG, YUNG-SHUEN SHEN and SHI-YOW LIN	1957	Decomposition of diazinon in aqueous solution by ozonation
Comment		
RICHARD I. DICK Ⓜ	1964	Comment on "New insights in dynamic modeling of a secondary settler—I. Flux theory and steady states analysis" by J. Ph. Chancelier, M. Cohen De Lara, C. Joannis and F. Pacard, *Wat. Res.* **31,** 1847–1856 (1997)

Author's Reply
C. JOANNIS[M], J. PH. CHANCELIER, M. COHEN DE LARA and F. PACARD — 1966

Research Note
A. KAPOOR[M] and T. VIRARAGHAVAN[M] — 1968 Removal of heavy metals from aqueous solutions using immobilized fungal biomass in continuous mode

Rapid Communication
SANG-KUK HAN, KAZUHIRO ICHIKAWA and HIDEO UTSUMI[M] — 1978 Generation of *p*-semiquinone radicals from chlorophenols in water during ozonation

1983 Forthcoming Conferences

1987 Corrigendum

JULY

OLIVIER DECAMP[M] and ALAN WARREN[M] — 1989 Bacterivory in ciliates isolated from constructed wetlands (reed beds) used for wastewater treatment

YU-SEN E. LIN, RADISAV D. VIDIC[M], JANET E. STOUT, CHRISTINE A. MCCARTNEY and VICTOR L. YU — 1997 Inactivation of *Mycobacterium avium* by copper and silver ions

LIISA TUOMINEN, HELINÄ HARTIKAINEN, TIMO KAIRESALO[M] and PETRA TALLBERG — 2001 Increased bioavailability of sediment phosphorus due to silicate enrichment

W. A. J. VAN BENTHUM, B. P. DERISSEN, M. C. M. VAN LOOSDRECHT[M] and J. J. HEIJNEN[M] — 2009 Nitrogen removal using nitrifying biofilm growth and denitrifying suspended growth in a biofilm airlift suspension reactor coupled with a chemostat

ORI LAHAV and MICHAL GREEN[M] — 2019 Ammonium removal using ion exchange and biological regeneration

NORA GÓMEZ — 2029 Use of epipelic diatoms for evaluation of water quality in the Matanza-Riachuelo (Argentina), a pampean plain river

V. HRISSANTHOU and S. HARTMANN — 2035 Measurements of critical shear stress in sewers

JEAN-MARC A. STOLL and WALTER GIGER — 2041 Mass balance for detergent-derived fluorescent whitening agents in surface waters of Switzerland

P. ALBÉRIC and M. LEPILLER — 2051 Oxydation de la matière organique dans un système hydrologique karstique alimenté par des pertes fluviales (Loiret, France)

HENRY X. CORSEUIL[M], CRAIG S. HUNT, RUY CARLOS FERREIRA DOS SANTOS and PEDRO J. J. ALVAREZ[M] — 2065 The influence of the gasoline oxygenate ethanol on aerobic and anaerobic BTX biodegradation

YU-HUI ZHANG, LARS-GÖRAN DANIELSSON and ZOLTAN BECZE — 2073 Partition of copper and cadmium between *n*-octanol and aqueous phases using segmented flow extraction

RAJEEV GOEL, TAKASHI MINO[M], HIROYASU SATOH[M] and TOMONORI MATSUO[M] — 2081 Enzyme activities under anaerobic and aerobic conditions in activated sludge sequencing batch reactor

J. P. GAO, J. MAGUHN, P. SPITZAUER and A. KETTRUP — 2089 Sorption of pesticides in the sediment of the Teufelsweiher pond (Southern Germany). II: Competitive adsorption, desorption of aged residues and effect of dissolved organic carbon

ÖMER AKGIRAY and AHMET M. SAATÇI — 2095 An algorithm for bank operation of declining rate filters

JO DEWULF, HERMAN VAN LANGENHOVE[M] and BENEDICTE HEIREMAN — 2106 The air/water exchange of volatile organic compounds from waters in the transient and turbulent regime

BO GEJLSBJERG, LONE FRETTE and PETER WESTERMANN — 2113 Dynamics of N_2O production from activated sludge

N. F. GRAY[M] — 2122 Acid mine drainage composition and the implications for its impact on lotic systems

M. RAZVIGOROVA, T. BUDINOVA, N. PETROV and V. MNKOVA — 2135 — Purification of water by activated carbons from apricot stones, lignites and anthracite

STEVEN W. LLOYD, JEANNE M. LEA, PAUL V. ZIMBA and CASEY C. GRIMM — 2140 — Rapid analysis of geosmin and 2-methylisoborneol in water using solid phase micro extraction procedures

FRANS E. MARX, MAUREEN B. TAYLOR and WILHELM O. K. GRABOW Ⓜ — 2147 — The application of a reverse transcriptase-polymerase chain reaction-oligonucleotide probe assay for the detection of human astroviruses in environmental water

FRANCISCO A. FUENTES, JORGE W. SANTO DOMINGO and TERRY C. HAZEN — 2154 — Survival of *Candida albicans* and *Pseudomonas aeruginosa* in oil polluted tropical coastal waters

JIENAN CHEN, STEVE TRUESDAIL, FUHUA LU, GUOGEN ZHAN, CARTER BELVIN, BEN KOOPMAN, SAM FARRAH Ⓜ and DINESH SHAH — 2171 — Long-term evaluation of aluminum hydroxide-coated sand for removal of bacteria from wastewater

SEONG-HOON YOON, CHUNG-HAK LEE Ⓜ, KYU-JIN KIM and ANTHONY G. FANE — 2180 — Effect of calcium ion on the fouling of nanofilter by humic acid in drinking water production

S. L. PERCIVAL Ⓜ, J. S. KNAPP, R. G. J. EDYVEAN and D. S. WALES — 2187 — Biofilms, mains water and stainless steel

Research Notes

E. J. TAYLOR, K. M. UNDERHILL, S. J. BLOCKWELL and D. PASCOE Ⓜ — 2202 — Haem biosynthesis in the freshwater macroinvertebrate *Gammarus pulex* (L.): effects of copper and lindane

SHU TAO — 2205 — Spatial and temporal variation in DOC in the Yichun River, China

C. MAURINES-CARBONEILL, L. MORIN, J. J. PERNELLE, N. DERLET, G. SACHON and G. LEBLON — 2211 — Reviviscence of aerobic chemoheterotrophic bacteria in an activated sludge pilot plant after a prolonged absence of oxygen

Technical Notes

DAVID SIMON and STUART HELLIWELL — 2220 — Extraction and quantification of chlorophyll *a* from freshwater green algae

PH. NAMOUR and M. C. MÜLLER — 2224 — Fractionation of organic matter from wastewater treatment plants before and after a 21-day biodegradability test: a physical-chemical method for measurement of the refractory part of effluents

RITCHELITA P. GALAPATE, ALOYSIUS U. BAES Ⓜ, KAZUAKI ITO, TETSUO MUKAI, EIJI SHOTO and MITSUMASA OKADA Ⓜ — 2232 — Detection of domestic waste in Kurose River using synchronous fluorescence spectroscopy

Comment

R. IRANPOUR Ⓜ, D. MILLER, M. ZERMEÑO and A. TAEBI — 2240 — Comment on "Numerical modeling of UV intensity: application to collimated-beam reactors and continuous-flow systems" by E. R. Blatchley, *Wat. Res.* **31,** 2205–2218

Author's Reply

ERNEST R. BLATCHLEY III Ⓜ — 2243

2247 — Corrigendum

I — Acknowledgement to Referees

AUGUST

YIWEI DENG — 2249 — Determination of major inorganic anions in rainwater by capillary electrophoresis

CHIN-PAO HUANG Ⓜ, HUNG-WEN WANG and PEI-CHUN CHIU — 2257 — Nitrate reduction by metallic iron

D. S. BALDWIN — 2265 — Reactive "organic" phosphorus revisited

C. DUEÑAS, M. C. FERNÁNDEZ, C. ENRÍQUEZ, J. CARRETERO and E. LIGER — 2271 — Natural radioactivity levels in Andalusian spas

WILLIAM A. HOUSE Ⓜ and MELANIE S. WARWICK	2279	Hysteresis of the solute concentration/discharge relationship in rivers during storms
CORBY LEE Ⓜ, NICHOLAS J. RUSSELL and GRAHAM F. WHITE Ⓜ	2291	Development and validation of laboratory microcosms for anionic surfactant biodegradation by riverine biofilms
ESTELLE MASSERET, CHRISTIAN AMBLARD and GILLES BOURDIER	2299	Changes in the structure and metabolic activities of periphytic communities in a stream receiving treated sewage from a waste stabilization pond
ESMA TÜTEM, REŞAT APAK and ÇAĞATAY F. ÜNAL	2315	Adsorptive removal of chlorophenols from water by bituminous shale
G. CATHALIFAUD, J. AYELE and M. MAZET Ⓜ	2325	Effet de la presence d'aluminium sur l'adsorption des acides fulviques naturels sur CAP (aluminium effect upon adsorption of natural fulvic acids onto PAC)
G. REES, K. POND, K. JOHAL, S. PEDLEY Ⓜ and A. RICKARDS	2335	Microbiological analysis of selected coastal bathing waters in the U.K., Greece, Italy and Spain
JEAN-LUC BERTRAND-KRAJEWSKI Ⓜ, GHASSAN CHEBBO and AGNES SAGET	2341	Distribution of pollutant mass vs volume in stormwater discharges and the first flush phenomenon
R. ANDREOZZI Ⓜ, G. LONGO, M. MAJONE Ⓜ and G. MODESTI	2357	Integrated treatment of olive oil mill effluents (OME): study of ozonation coupled with anaerobic digestion
A. C. VANTARAKIS Ⓜ and M. PAPAPETROPOULOU Ⓜ	2365	Detection of enteroviruses and adenoviruses in coastal waters of SW Greece by nested polymerase chain reaction
H. BENMOUSSA, R. D. TYAGI Ⓜ and P. G. C. CAMPBELL	2373	Simultaneous sewage sludge digestion and metal leaching using an internal loop reactor: effect of suspended solids concentration
S. XU and N. NIRMALAKHANDAN Ⓜ	2391	Use of QSAR models in predicting joint effects in multi-component mixtures of organic chemicals
RAJAT R. CHAUDHURY, JOSE A. H. SOBRINHO, RAYMOND M. WRIGHT and MAKAM SREENIVAS	2400	Dissolved oxygen modeling of the Blackstone River (Northeastern United States)
BO SHI, HERBERT E. ALLEN Ⓜ and MARCO T. GRASSI Ⓜ	2413	Changes in dissolved and particulate copper following mixing of POTW effluents with Delaware River water
PICHAYA RACHDAWONG, ERIK R. CHRISTENSEN Ⓜ and JAY F. KARLS	2422	Historical PAH fluxes to Lake Michigan sediments determined by factor analysis
ELISABETH V. MÜNCH and PAUL F. GREENFIELD Ⓜ	2431	Estimating VFA concentrations in prefermenters by measuring pH
A. GOUZINIS, N. KOSMIDIS, D. V. VAYENAS and G. LYBERATOS Ⓜ	2442	Removal of Mn and simultaneous removal of NH_3, Fe and Mn from potable water using a trickling filter
B. DAVID, M. LHOTE, V. FAURE and P. BOULE	2451	Ultrasonic and photochemical degradation of chlorpropham and 3-chloroaniline in aqueous solution
ANA DELETIC Ⓜ	2462	The first flush load of urban surface runoff
H. TWIST Ⓜ, A. C. EDWARDS Ⓜ and G. A. CODD Ⓜ	2471	Algal growth responses to waters of contrasting tributaries of the River Dee, north-east Scotland
KONRAD SZAFNICKI, JACQUES BOURGOIS, DIDIER GRAILLOT, DOMINIQUE Di BENEDETTO, PHILIPPE BREUIL and JEAN-PIERRE POYET	2480	Real-time supervision of industrial waste-water treatment plants applied to the surface treatment industries
V. DUPRE, M. PONASSE, Y. AURELLE and A. SECQ	2491	Bubble formation by water release in nozzles—I. Mechanisms
M. PONASSE, V. DUPRE, Y. AURELLE and A. SECQ	2498	Bubble formation by water release in nozzles—II. Influence of various parameters on bubble size
YUYANG GONG, JOSEPH V. DEPINTO Ⓜ, G.-YULL RHEE and XIA LIU	2507	Desorption rates of two PCB congeners from suspended sediments—I. Experimental results

YUYANG GONG and JOSEPH V. DEPINTO Ⓜ 2518 Desorption rates of two PCB congeners from suspended sediments—II. Model simulation

Research Notes

D. M. SHISKOWSKI and D. S. MAVINIC Ⓜ 2533 Biological treatment of a high ammonia leachate: influence of external carbon during initial startup

L. ROBIN JONES, SARAH A. OWEN, PHILIP HORRELL and RICHARD G. BURNS Ⓜ 2542 Bacterial inoculation of granular activated carbon filters for the removal of atrazine from surface water

J. M. GARRIDO, J. MORENO R. MÉNDEZ-PAMPÍN and J. M. LEMA Ⓜ 2550 Nitrous oxide production under toxic conditions in a denitrifying anoxic filter

Technical Notes

JIA-ZHONG ZHANG and PETER B. ORTNER 2553 Effect of thawing condition on the recovery of reactive silicic acid from frozen natural water samples

JOHN HOBSON 2556 Biowave™: a novel reactor for the treatment of wastewater

SEPTEMBER

E. C. DEVITT, F. DUCELLIER, P. COTE and M. R. WIESNER Ⓜ 2563 Effects of natural organic matter and the raw water matrix on the rejection of atrazine by pressure-driven membranes

JAN E. VERMAAT and M. KHALID HANIF 2569 Performance of common duckweed species (*Lemnaceae*) and the waterfern *Azolla filiculoides* on different types of waste water

Y. Z. YACOBI, V. GERHARDT, Y. GONEN-ZURGIL and A. SUKENIK 2577 Delayed fluorescence excitation spectroscopy: a rapid method for qualitative and quantitative assessment of natural population of phytoplankton

NATASCHA KLINKOW, JOLANTA OLEKSY-FRENZEL and MARTIN JEKEL 2583 Toxicity-directed fractionation of organic compounds in tannery wastewater with regard to their molecular weight and polarity

JIAN-YING HU, TAKAKO AIZAWA, YUTAKA OOKUBO, TAKESHI MORITA and YASUMOTO MAGARA Ⓜ 2593 Adsorptive characteristics of ionogenic aromatic pesticides in water on powdered activated carbon

JEOUNG GYU LEE, WATARU NISHIJIMA Ⓜ, TETSUO MUKAI, KAZUTO TAKIMOTO, TOHRU SEIKI, KIYONORI HIRAOKA and MITSUMASA OKADA Ⓜ 2601 Factors to determine the functions and structures in natural and constructed tidal flats

F. LÜCKING, H. KÖSER, M. JANK and A. RITTER 2607 Iron powder, graphite and activated carbon as catalysts for the oxidation of 4-chlorophenol with hydrogen peroxide in aqueous solution

JAMES S. JENSEN and GEORGE R. HELZ 2615 Dechlorination kinetics at alkaline pH of *N*-chloropiperidine, a genotoxin in chlorinated municipal wastewater

S. DE ROSA, F. SCONZA and L. VOLTERRA 2621 Biofilm amount estimation by fluorescein diacetate

YAN LIU Ⓜ and HERBERT H. P. FANG Ⓜ 2627 Precipitates in anaerobic granules treating sulphate-bearing wastewater

BAOZHEN WANG Ⓜ, JUN LI, LIN WANG Ⓜ, MEISHENG NIE and JI LI 2633 Mechanism of phosphorus removal by SBR submerged biofilm system

T. GSCHLÖßL, C. STEINMANN, P. SCHLEYPEN and A. MELZER 2639 Constructed wetlands for effluent polishing of lagoons

C. JAMES MARTEL Ⓜ, ROSA AFFLECK and MELINDA YUSHAK 2646 Operational parameters for mechanical freezing of alum sludge

LECH GMACHOWSKI 2655 Flow drag in polydisperse systems

KEVIN H. GARDNER Ⓜ, THOMAS L. THEIS Ⓜ and THOMAS C. YOUNG 2660 The significance of shear stress in the agglomeration kinetics of fractal aggregates

YUNG-SHUEN SHEN and YOUNG KU Ⓜ 2669 Decomposition of gas-phase chloroethenes by UV/O_3 process

Sheng H. Lin[M] and Wen J. Lan	2680	Treatment of waste oil/water emulsion by ultrafiltration and ion exchange
Silvano Monarca, Alberto Zanardini, Donatella Feretti, Antonio Dalmiglio, Egizia Falistocco, Patrizia Manica and Giuseppe Nardi	2689	Mutagenicity of extracts of lake drinking water treated with different disinfectants in bacterial and plant tests
Jan H. Janse[M], Ellen van Donk and Tom Aldenberg	2696	A model study on the stability of the macrophyte-dominated state as affected by biological factors
O. Ince	2707	Performance of a two-phase anaerobic digestion system when treating dairy wastewater
Juan M. Antelo, Florencio Arce and Francisco J. Penedo	2714	Effect of seasonal changes on the complexing of Cu(II) by dissolved organic matter in river water
J. Sarasa, M. P. Roche, M. P. Ormad, E. Gimeno, A. Puig and J. L. Ovelleiro	2721	Treatment of a wastewater resulting from dyes manufacturing with ozone and chemical coagulation
Z. Feleke, K. Araki, Y. Sakakibara, T. Watanabe[M] and M. Kuroda[M]	2728	Selective reduction of nitrate to nitrogen gas in a biofilm-electrode reactor
Balasubramanyam Vanukuru, Joseph R. V. Flora[M], Michael F. Petrou and C. Marjorie Aelion	2735	Control of pH during denitrification using an encapsulated phosphate buffer
Cho Sing and Jian Yu[M]	2746	Copper adsorption and removal from water by living mycelium of white-rot fungus *Phanerochaete chrysosporium*
Lecheng Lei, Xijun Hu and Po-Lock Yue	2753	Improved wet oxidation for the treatment of dyeing wastewater concentrate from membrane separation process
David Kratochvil and Bohumil Volesky	2760	Biosorption of Cu from ferruginous wastewater by algal biomass
Michail I. Gladyshev, Nadezhda N. Sushchik, Galina S. Kalachova and Ludmila A. Shchur	2769	The effect of algal blooms on the disappearance of phenol in a small forest pond
K.-E. Lindenschmidt[M], M. Suhr, M. K. Magumba, R. E. Hecky and F. W. B. Bugenyi	2776	Loading of solute and suspended solids from rural catchment areas flowing into Lake Victoria in Uganda
Thomas Schwartz, Sandra Hoffmann and Ursula Obst	2787	Formation and bacterial composition of young, natural biofilms obtained from public bank-filtered drinking water systems
David Benanou, Françoise Acobas and Pascale Sztajnbok	2798	Analysis of haloacetic acids in water by a novel technique: simultaneous extraction–derivatization
M. Pettine, I. Barra, L. Campanella and Frank J. Millero	2807	Effect of metals on the reduction of chromium (VI) with hydrogen sulfide
E. González-Pradas, M. Villafranca-Sánchez, M. Fernández-Pérez, M. Socías-Viciana and M. D. Ureña-Amate	2814	Sorption and leaching of diuron on natural and peat-amended calcareous soil from Spain
Spyros K. Golfinopoulos, Nikos K. Xilourgidis, Maria N. Kostopoulou and Themistokles D. Lekkas	2821	Use of a multiple regression model for predicting trihalomethane formation
Research Notes		
Andrew M. Hayes, Joseph R. V. Flora[M] and Jamil Khan	2830	Electrolytic stimulation of denitrification in sand columns
U. Schümann and P. Gründler	2835	Electrochemical degradation of organic substances at PbO2 anodes: monitoring by continuous CO2 measurements

U. KALUZA, P. KLINGELHÖFER and K. TAEGER — 2843 Microbial degradation of EDTA in an industrial wastewater treatment plant

R. N. J. COMANS, J. HILTON, O. VOITSEKHOVITCH, G. LAPTEV, V. POPOV, M. J. MADRUGA, A. BULGAKOV, J. T. SMITH, N. MOVCHAN and A. KONOPLEV — 2846 A comparative study of radiocesium mobility measurements in soils and sediments from the catchment of a small upland oligotrophic lake (Devoke Water, U.K.)

SHAOYING QI — 2856 Expression for critical suspended particle size in granular media filtration processes

BELLA S. W. HO and T.-Y. TAM — 2860 *Giardia* and *Cryptosporidium* in sewage contaminated river waters

Technical Note

WELLS W. WU, PAUL A. CHADIK and CHARLES J. SCHMIDT — 2865 An *in situ* synthesis of cyanogen chloride as a safe and economical aqueous standard

Comment

STEVEN K. DENTEL[M] — 2870 Comment on "Kinetics of pneumatic flocculation" by I. Sholji and N. M. Kazi, *Wat. Res.* **31**(12), 2979–2988

Author's Reply

I. SHOLJI[M] and N. M. KAZI — 2873

2877 Forthcoming Conferences

OCTOBER

LUC-ANDRE LECLERC — v Editorial: Mediterranean: a region where water is central

YU LIU, GUANG-HAO CHEN[M] and ETIENNE PAUL[M] — 2883 Effect of the S_0/X_0 ratio on energy uncoupling in substrate-sufficient batch culture of activated sludge

TOM TANGHE, GREET DEVRIESE and WILLY VERSTRAETE[M] — 2889 Nonylphenol degradation in lab scale activated sludge units is temperature dependent

J. FITZPATRICK — 2897 Sludge processing by anaerobic digestion and superheated steam drying

VALTER TANDOI[M], MAURO MAJONE[M], JOHN MAY[M] and ROBERTO RAMADORI[M] — 2903 The behaviour of polyphosphate accumulating *Acinetobacter* isolates in an anaerobic–aerobic chemostat

SLAVICA PAVLINIĆ and IVAN PILJAC — 2913 Electrolytic desorption of silver from ion-exchange resins

JIAYANG CHENG[M], MAKRAM T. SUIDAN[M] and ALBERT D. VENOSA — 2921 Anaerobic biotransformation of 2,4-dinitrotoluene with ethanol, methanol, acetic acid and hydrogen as primary substrates

H. J. WINKELS, G. BLOM[M], S. B. KROONENBERG and L. LIJKLEMA — 2931 Dilution of riverine heavy metal input concentrations by suspension of sediments and algal growth in the IJsselmeer

JO DEWULF, HERMAN VAN LANGENHOVE[M], MAARTEN EVERAERT and HELGA VANTHOURNOUT — 2941 Volatile organic compounds in the Scheldt estuary along the trajectory Antwerp–Vlissingen: concentration profiles, modelling and estimation of emissions into the atmosphere

A. DEININGER[M], E. HOLTHAUSEN and P. A. WILDERER[M] — 2951 Velocity and solids distribution in circular secondary clarifiers: full scale measurements and numerical modelling

MOHAMMAD Z. IQBAL — 2959 Application of environmental isotopes in storm-discharge analysis of two contrasting stream channels in a watershed

EMIL RYDIN and EUGENE B. WELCH — 2969 Aluminum dose required to inactivate phosphate in lake sediments

KARIN A. ENNIK-MAARSEN, ANNE MARIE LOUWERSE, WIM ROELOFSEN and ALFONS J. M. STAMS — 2977 Influence of monochlorophenols on methanogenic activity in granular sludge

MARYAM ALBORZFAR, GUNNAR JONSSON and CHRISTIAN GRØN — 2983 Removal of natural organic matter from two types of humic ground waters by nanofiltration

Camilla Grunditz[M], Lena Gumaelius and Gunnel Dalhammar[M]	2995	Comparison of inhibition assays using nitrogen removing bacteria: application to industrial wastewater
Jehng-Jyun Yao, Zhi-Heng Huang and Susan J. Masten	3001	The ozonation of pyrene: pathway and product identification
M. R. Natarajan, Wei-Min Wu, Henry Wang, Lakshmi Bhatnagar and Mahendra K. Jain[M]	3013	Dechlorination of spiked PCBs in lake sediment by anaerobic microbial granules
Ligia Stoica, Magdalena Dinculescu and Carmen G. Plapcianu	3021	Mn(II) recovery from aqueous systems by flotation
X. Lefebvre, E. Paul[M], M. Mauret[M], P. Baptiste and B. Capdeville	3031	Kinetic characterization of saponified domestic lipid residues aerobic biodegradation
Th. Nameche and J. L. Vasel[M]	3039	Hydrodynamic studies and modelization for aerated lagoons and waste stabilization ponds
Chris C. Tanner[M], James P. S. Sukias and Martin P. Upsdell	3046	Organic matter accumulation during maturation of gravel-bed constructed wetlands treating farm dairy wastewaters
E. Barrado, F. Prieto, M. Vega and F. Fernández-Polanco[M]	3055	Optimization of the operational variables of a medium-scale reactor for metal-containing wastewater purification by ferrite formation
G. N. Manju, C. Raji and T. S. Anirudhan	3062	Evaluation of coconut husk carbon for the removal of arsenic from water
Mamdouh M. Nassar	3071	Energy consumption and mass transfer during adsorption using gas and mechanical stirring systems
R. M. Awadallah, M. E. Soltan, M. S. A. Shabeb and S. M. N. Moalla	3080	Bacterial removal of nitrate, nitrite and sulphate in wastewater
Mohammed Ajmal[M], Akhtar Hussain Khan, Shamim Ahmad[M] and Anees Ahmad	3085	Role of sawdust in the removal of copper(II) from industrial wastes
S. Körner, G. B. Lyatuu and J. E. Vermaat	3092	The influence of *Lemna gibba* L. on the degradation of organic material in duckweed-covered domestic wastewater
Tetsuro Kohno[M] and Sakae Fukunaga	3099	The "cut-off probability" as the measure of quantal improbability in the dilution method
Egil T. Gjessing, J. J. Alberts[M], August Bruchet, Per Kristian Egeberg, Espen Lydersen, Linda B. McGown, Jarafshan J. Mobed, Uwe Münster, Janusz Pempkowiak, Mike Perdue, Harsha Ratnawerra[M], D. Rybacki, M. Takacs and Gudrun Abbt-Braun	3108	Multi-method characterisation of natural organic matter isolated from water: characterisation of reverse osmosis-isolates from water of two semi-identical dystrophic lakes basins in Norway
Joerg E. Drewes[M] and Martin Jekel	3125	Behavior of DOC and AOX using advanced treated wastewater for groundwater recharge
Dick T. H. M. Sijm, Manuela Haller, Joop A. J. Faber and S. Marca Schrap	3134	Influence of carrier and bactericide on sorption coefficients of hydrophobic organic compounds for two lake sediments
Dag Hongve and Gunvor Åkesson	3143	Comparison of nephelometric turbidity measurements using wavelengths 400–600 and 860nm
Alberto Santojanni, Gessica Gorbi and Franco Sartore	3146	Prediction of fecundity in chronic toxicity tests on *Daphnia magna*
A. Lakel, M. Baudu and C. Dagot	3157	Hydrodynamique d'un filtre biologique en systeme insature avec nitrification d'un effluent septique
A. González Casado, E. J. Alonso Hernández and J. L. Vílchez	3168	Determination of fatty acids (C_8–C_{22}) in urban wastewater by GC-MS

Technical Notes

HELEN E. KEENAN, ELEFTHERIOS N. PAPAVASILOPOULOS Ⓜ and DAVID H. BACHE Ⓜ — 3173 Measurement of polymer residuals in an alum sludge

JUTTA FASTNER, INGE FLIEGER and UWE NEUMANN — 3177 Optimised extraction of microcystins from field samples—a comparison of different solvents and procedures

A. H. ELLIOTT — 3182 Prediction of illness risk near ocean outfalls using frequency distributions of bacterial concentrations

I. DRELA, P. FALEWICZ and S. KUCZKOWSKA — 3188 New rapid test for evaluation of scale inhibitors

3192 Erratum

NOVEMBER

Review Papers

T. MINO Ⓜ, M. C. M. VAN LOOSDRECHT Ⓜ and J. J. HEIJNEN Ⓜ — 3193 Microbiology and biochemistry of the enhanced biological phosphate removal process

V. CAMEL Ⓜ and A. BERMOND — 3208 The use of ozone and associated oxidation processes in drinking water treatment

DINGWANG CHEN and AJAY K. RAY Ⓜ — 3223 Photodegradation kinetics of 4-nitrophenol in TiO_2 suspension

JEHNG-JYUN YAO, ZHI-HENG HUANG and SUSAN J. MASTEN — 3235 The ozonation of benz[a]anthracene: pathway and product identification

THOMAS A. TERNES — 3245 Occurrence of drugs in German sewage treatment plants and rivers

SANG-KUK HAN, KAZUHIRO ICHIKAWA Ⓜ and HIDEO UTSUMI Ⓜ — 3261 Quantitative analysis for the enhancement of hydroxyl radical generation by phenols during ozonation of water

INDRA N. MITRA, ARUP K. SENGUPTA Ⓜ, IRWIN J. KUGELMAN and ROBERT CREIGHTON — 3267 Evaluating composite ion exchangers (CIX) for improved stability of anaerobic biological reactors

DIEDERIK T. VAN DER MOLEN, ROB PORTIELJE, PAUL C. M. BOERS and LAMBERTUS LIJKLEMA Ⓜ — 3281 Changes in sediment phosphorus as a result of eutrophication and oligotrophication in Lake Veluwe, The Netherlands

S. V. DIMITROVA and D. R. MEHANDGIEV — 3289 Lead removal from aqueous solutions by granulated blast-furnace slag

MICHAEL A. ANDERSON, MIC H. STEWART, MARYLYNN V. YATES Ⓜ and CHARLES P. GERBA Ⓜ — 3293 Modeling the impact of body-contact recreation on pathogen concentrations in a source drinking water reservoir

OSMAN N. OZDEMIR and A. METIN GER — 3307 Realistic numerical simulation of chlorine decay in pipes

F. PAUNE, J. CAIXACH, I. ESPADALER Ⓜ, J. OM and J. RIVERA — 3313 Assessment on the removal of organic chemicals from raw and drinking water at a Llobregat river water works plant using GAC

E. DIAMADOPOULOS Ⓜ, D. SAKELLARIADIS and E. KOUKOURAKI — 3325 The effect of humic acid on the transport of volatile chlorinated hydrocarbons in soil

H. Y. ZHOU, R. Y. H. CHEUNG, K. M. CHAN and M. H. WONG Ⓜ — 3331 Metal concentrations in sediments and *tilapia* collected from inland waters of Hong Kong

HANQING YU Ⓜ, FRANCIS WILSON Ⓜ and JOO-HWA TAY Ⓜ — 3341 Kinetic analysis of an anaerobic filter treating soybean wastewater

ANNE BELINDA THOMSEN and HANS HENRIK KILEN — 3353 Wet oxidation of quinoline: intermediates and by-product toxicity

SJON KORTEKAAS, ROBERT R. WIJNGAARDE, JAN-WILLEM KLOMP, GATZE LETTINGA Ⓜ and JIM A. FIELD — 3362 Anaerobic treatment of hemp thermomechanical pulping wastewater

NILS RISGAARD-PETERSEN, LARS PETER NIELSEN and T. HENRY BLACKBURN — 3371 Simultaneous measurement of benthic denitrification, with the isotope pairing technique and the N_2 flux method in a continuous flow-through system

JINHUI LI and HONGXIAO TANG[M] — 3378 Acidification capacity model: formulation and application

KWANG-HO CHOO and CHUNG-HAK LEE — 3387 Hydrodynamic behavior of anaerobic biosolids during crossflow filtration in the membrane anaerobic bioreactor

NEDRA DEGRAFFENREID and GINA S. SHREVE — 3398 The effect of cadmium on the kinetics of trichloroethylene biodegradation by *Pseudomonas (Burkolderia) picketti* PK01 under denitrifying conditions

M. BECCARI[M], M. MAJONE[M], P. MASSANISSO and R. RAMADORI[M] — 3403 A bulking sludge with high storage response selected under intermittent feeding

F. JULIEN, M. BAUDU[M] and M. MAZET[M] — 3414 Relationship between chemical and physical surface properties of activated carbon

PYEONG-KOO LEE and JEAN-CLAUDE TOURAY — 3425 Characteristics of a polluted artificial soil located along a motorway and effects of acidification on the leaching behavior of heavy metals (Pb, Zn, Cd)

KATSUHIKO MATSUNAGA, JUN NISHIOKA, KENSHI KUMA, KENJI TOYA and YOSHIHIRO SUZUKI — 3436 Riverine input of bioavailable iron supporting phytoplankton growth in Kesennuma Bay (Japan)

JAE-SOK KIM[M], CHUNG-HAK LEE[M] and HEE-DONG CHUN[M] — 3443 Comparison of ultrafiltration characteristics between activated sludge and BAC sludge

PI-HSIN LIU, GUOGEN ZHAN, SPYROS A. SVORONOS[M] and BEN KOOPMAN — 3452 Diauxic lag from changing electron acceptors in activated sludge treatment

J. PH. CHANCELIER, G. CHEBBO and E. LUCAS-AIGUIER — 3461 Estimation of settling velocities

Research Notes

MAMIE NOZAWA, HONG-YING HU[M], KOICHI FUJIE[M], HAJIME TANAKA and KOHEI URANO[M] — 3472 Quantitative detection of *Enterobacter cloacae* strain HO-1 in bioreactor for chromate wastewater treatment using polymerase chain reaction (PCR)

B. S. O. DE CEBALLOS, A. KÖNIG[M] and J. F. DE OLIVEIRA — 3477 Dam reservoir eutrophication: a simplified technique for a fast diagnosis of environmental degradation

Technical Notes

AKISSA BAHRI[M] — 3484 Fertilizing value and polluting load of reclaimed water in Tunisia

F. GERMIRLI BABUNA, O. INCE, D. ORHON[M] and A. ŞIMŞEK — 3490 Assessment of inert COD in pulp and paper mill wastewater under anaerobic conditions

ŞAHİNDE DEMİRCİ, BAKİ ERDOĞAN and RECEP ÖZCİMDER — 3495 Wastewater treatment at the petroleum refinery, Kırıkkale, Turkey using some coagulants and Turkish clays as coagulant aids

Comment

REZA IRANPOUR[M], W. PROSKUROWSKI, D. MILLER and M. SAADATPOUR — 3500 Comment on "Neural network predictors of average score per taxon and number of families at unpolluted river sites in Great Britain", by W. J. Walley and V. N. Fontama, *Wat. Res.* **32**(3), 613–622.

Authors' Reply

W. J. WALLEY[M] and V. N. FONTAMA — 3502

DECEMBER

Review Paper

THOMAS HÖFER — 3505 Tainting of seafood and marine pollution

MICHAL GREEN[M], ERAN FRIEDLER[M] and IRIS SAFRAI — 3513 Enhancing nitrification in vertical flow constructed wetland utilizing a passive air pump

F. PERROT, T. JOUENNE, M. FEUILLOLEY, H. VAUDRY and G.-A. JUNTER — 3521 Gel immobilization improves survival of *Escherichia coli* under temperature stress in nutrient-poor natural water

C. VISVANATHAN, BOWO DJOKO MARSONO and BISWADEEP BASU	3527	Removal of THMP by nanofiltration: effects of interference parameters
ROBERT W. STERNER and JAMES P. GROVER	3539	Algal growth in warm temperate reservoirs: kinetic examination of nitrogen, temperature, light, and other nutrients
NORIO SUGIURA, NORIO IWAMI, YUHEI INAMORI, OSAMU NISHIMURA and RYUICHI SUDO	3549	Significance of attached cyanobacteria relevant to the occurrence of musty odor in Lake Kasumigaura
J. R. DANALEWICH, T. G. PAPAGIANNIS, R. L. BELYEA, M. E. TUMBLESON and L. RASKIN	3555	Characterization of dairy waste streams, current treatment practices, and potential for biological nutrient removal
M. SEIDL, P. SERVAIS and J. M. MOUCHEL	3569	Organic matter transport and degradation in the river Seine (France) after a combined sewer overflow
MARISOL VEGA, RAFAEL PARDO, ENRIQUE BARRADO and LUIS DEBÁN	3581	Assessment of seasonal and polluting effects on the quality of river water by exploratory data analysis
D. GARCIA-CALDERON, P. BUFFIERE, R. MOLETTA and S. ELMALEH	3593	Anaerobic digestion of wine distillery wastewater in down-flow fluidized bed
DIDIER LIÈVREMONT, FRANCOISE SEIGLE-MURANDI and JEAN-LOUIS BENOIT-GUYOD	3601	Removal of PCNB from aqueous solution by a fungal adsorption process
K. N. OHLINGER, T. M. YOUNG and E. D. SCHROEDER	3607	Predicting struvite formation in digestion
PASCALE M. NIREL, PIERRE-EMMANUEL PARDO, JEAN-CLAUDE LANDRY and ROGER REVACLIER	3615	Method for EDTA speciation determination: application to sewage treatment plant effluents
JENNIFER P. BULL, ALESSIO N. SERREQI, TAO CHEN and COLETTE BREUIL	3621	Development of an immunoassay for a quaternary ammonium compound, benzyldimethyldodecylammonium chloride
FUHU XIA, HALUK BEYENAL and ZBIGNIEW LEWANDOWSKI	3631	An electrochemical technique to measure local flow velocity in biofilms
XIAOMEI LIN, ROBERT C. BURNS and GEOFFREY A. LAWRANCE	3637	Effect of electrolyte composition, and of added iron(III) in the presence of selected organic complexing agents, on nickel(II) precipitation by lime
K. VINODGOPAL, JULIE PELLER, OKSANA MAKOGON and PRASHANT V. KAMAT	3646	Ultrasonic mineralization of a reactive textile azo dye, Remazol black B
S. KÖRNER and J. E. VERMAAT	3651	The relative importance of *Lemna gibba* L., bacteria and algae for the nitrogen and phosphorus removal in duckweed-covered domestic wastewater
V. LEGRAND, D. HOURDET, R. AUDEBERT and D. SNIDARO	3662	Deswelling and flocculation of gel networks: application to sludge dewatering
JIUNN-JYI LAY, YU-YOU LI and TATSUYA NOIKE	3673	Developments of bacterial population and methanogenic activity in a laboratory-scale landfill bioreactor
E. ANNE GREENE, LISA M. GIEG, DEBORA L. COY and PHILLIP M. FEDORAK	3680	Sulfolane biodegradation potential in aquifer sediments at sour natural gas plant sites
STEVEN K. DENTEL, AHMAD I. JAMRAH and DONALD L. SPARKS	3689	Sorption and cosorption of 1,2,4-trichlorobenzene and tannic acid by organo-clays
BIANTING SUN and BARRY N. NOLLER	3698	Simultaneous determination of trace amounts of free cyanide and thiocyanate by a stopped-flow spectrophotometric method
A. J. GUWY, H. BUCKLAND, F. R. HAWKES and D. L. HAWKES	3705	Active biomass in activated sludge: comparison of respirometry with catalase activity measured using an on-line monitor
HONGTING ZHAO and GEORGE F. VANCE	3710	Sorption of trichloroethylene by organo-clays in the presence of humic substances

KATIA E. LASARIDI and ED I. STENTIFORD Ⓜ — 3717 — A simple respirometric technique for assessing compost stability

PHILLIP ELLIOTT, SANTO RAGUSA and DAVID CATCHESIDE — 3724 — Growth of sulfate-reducing bacteria under acidic conditions in an upflow anaerobic bioreactor as a treatment system for acid mine drainage

AMANDA R. KOTLASH and BRUCE C. CHESSMAN — 3731 — Effects of water sample preservation and storage on nitrogen and phosphorus determinations: implications for the use of automated sampling equipment

MUHAMMAD H. AL-MALACK Ⓜ, G. K. ANDERSON Ⓜ and ALI ALMASI Ⓜ — 3738 — Treatment of anoxic pond effluent using crossflow microfiltration

KJETIL RASMUSSEN Ⓜ and ZBIGNIEW LEWANDOWSKI Ⓜ — 3747 — The accuracy of oxygen flux measurements using microelectrodes

BO SHI, HERBERT E. ALLEN Ⓜ, MARCO T. GRASSI Ⓜ and HUIZHONG MA — 3756 — Modeling copper partitioning in surface waters

MARIJAN VUKOVIĆ and JASENKA BIŠĆAN — 3765 — A contribution to environmental risk assessment for transport of cadmium through groundwater layers. Case study of the Sava River (near Zagreb, Croatia) region

C. RAJI and T. S. ANIRUDHAN — 3772 — Batch Cr(VI) removal by polyacrylamide-grafted sawdust: kinetics and thermodynamics

Research Notes

DAN C. DEBORDE, WILLIAM W. WOESSNER, BRUCE LAUERMAN and PATRICK BALL — 3781 — Coliphage prevalence in high school septic effluent and associated ground water

M. A. GAJA and J. S. KNAPP — 3786 — Removal of 2-mercaptobenzothiazole by activated sludge: a cautionary note

M. INÊS M. SOARES Ⓜ and AHARON ABELIOVICH Ⓜ — 3790 — Wheat straw as substrate for water denitrification

Technical Notes

L. MOUSA and C. F. FORSTER — 3795 — The effect of trace organics on the inhibition of gas production by anaerobic sludges: batch studies

JOSÉ ANTONIO GONZÁLEZ-OREJA and JOSÉ IGNACIO SAIZ-SALINAS — 3799 — Exploring the relationships between abiotic variables and benthic community structure in a polluted estuarine system

Comment

RAY C. WHITEHOUSE — 3808 — Comment on "A new gas tracer method to measure oxygen transfer and enhancement factor on RBC," by B.-E. Boumansour and J.-L. Vasel, *Wat. Res.* **32**(4), 1049–1058.

Authors' Reply

B.-E. BOUMANSOUR — 3809

3810 Erratum

3811 Forthcoming Conferences